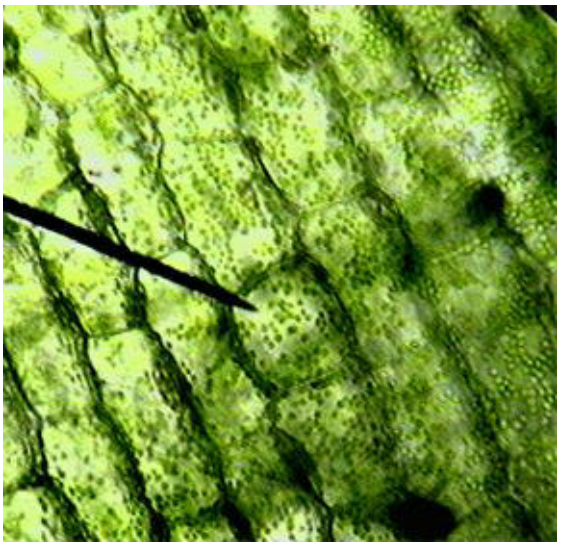
Chlorophyll: Why?

Standard 3240-0201

Introduction

Chlorophyll is the part of the plant that gives plants their green color. Chlorophyll absorbs the sunlight and turns the energy from the sun into usable energy.



Chlorophyll Extraction

Materials

- leaf from a coleus plant or any other nongreen
- plant
- rubbing alcohol
- hot plate
- beaker

Procedure

1. Place coleus leaf in the beaker and cover with alcohol.
2. Heat very slowly over very low heat. If your alcohol begins to boil it is too hot.
3. Remove beaker from heat when green color appears in the alcohol, this is the chlorophyll.

Saftey Concerns

Chemical Safety, Heat Safety, Fire Safety, eye safety

Analysis

1. Where do you think the green color of the alcohol comes from?

2. Why can't you see the green color in the leaf?

The case of the disappearing chlorophyll

Introduction

This will help students see how important sunlight is to chlorophyll's job.

Materials

- black paper
- scissors
- Live plant with leaves, trees work great.

Procedure

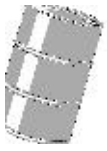
1. Cut out a geometric shape from a piece of black construction paper.
2. Find a green leaf outside and paperclip the shape to the leaf. Do not remove the leaf from the plant.
3. Return in a week to observe what has happened. You can remove the leaf from the tree at this point and take it into the classroom for further observations.

Analysis

1. What did you observe happened to your leaf?

2. Why do you think that your leaf changed? Or why didn't your leaf change?





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